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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/297,256	04/28/99	SUNDHOLM	G U012229-2

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QM02/1106

EXAMINER

KIM, C

ART UNIT	PAPER NUMBER
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3752

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DATE MAILED: 11/06/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/297,256

Applicant(s)
Sundholm

Examiner
Christopher S. Kim

Group Art Unit
3752



☒ Responsive to communication(s) filed on 29 Aug 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-12 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Finland on September 15, 1997. It is noted, however, that applicant has not filed a certified copy of the Finland application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

2. Claims 1-6, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sundholm.

Sundholm discloses, in figure 1, a fire fighting apparatus comprising: a plurality of spray heads 1, 1a; a tube system 3, 4; at least one drive gas source 2; a release means (inherent in the device); and a stop/opening valve (no reference number but shown downstream of each gas source). As to the extinguishing medium being constituted by a volume of the tube at least to a substantial extent, an extensive tube system in an engine room of a ship inherently constitutes a volume substantially larger than the volume of the extinguishing medium in the gas source 2. The apparatus is divided into main sections, each containing a gas source 2. Figure 1 shows one spray head 1 per zone while figure 2 shows multiple spray heads 13 per zone. The drive gas is nitrogen (column 1, line 40) having a pressure of 30 to 400 bar (column 2, line 65 discloses 100 to 200 bar). The spray heads generate fog-like spray of water (column 1, line 41 and line 51).

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Claim Rejections - 35 USC § 103

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundholm as applied to claim 6 above, and further in view of Willms.

Willms discloses, in figure 1, a fire fighting apparatus with zone 1 and zone 2 each zone having a release means 20, 20A arranged along tube 12 for releasing a group of spray heads 15, 15A. Each group of spray heads contains a solenoid valve 17, 17A. It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the zone release means and solenoid valve of Willms in the fire fighting apparatus of Sundholm to conserve the extinguishing medium.

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundholm as applied to claim 1 above, and further in view of Jamison.

With respect to claim 9, Jamison discloses, in column 5, lines 6-11, a text by Donald W. Mitchell titled Mines Fires where fog-like spray water is critical in fighting mine fires. It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the fire fighting apparatus of Sundholm in a mine tunnel as disclosed by Jamison. The device of Sundholm placed in a tunnel would inherently follow the longitudinal direction of the tunnel.

With respect to claim 10, Sundholm discloses, in column 3, lines 23-25, spray heads 22, 23 arranged in opposite direction. Sundholm does not disclose different heights at

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which the spray heads are placed. The height placement of spray heads is a matter of design choice in directing the spray of water to a particular location.

Response to Arguments

5. Applicant's arguments filed August 29, 2000 have been fully considered but they are not persuasive.

In response to applicant's argument that Sundholm does not show an apparatus having a long tube whereto a gas source is coupled, claim 1 reads "...said at least one drive gas source (9 to 12; 9' to 12') is coupled to a long tube..." Sundholm shows, in figure 1, an apparatus wherein at least one drive gas source 2 is coupled to a long tube (tube of tube system 3, 4).

In response to applicant's argument that tube 3 does not constitute a volume of substantial extent, Sundholm does not set limitations to the size of the tube in the tube system nor the size of the tube system itself. From the extensive network of the tube system 3, 4 as shown in figure 1 of Sundholm, the volume of the source of extinguishing medium is considered to be constituted by the volume of the tube at least to a substantial extent.

In response to applicant's argument that Sundholm does not teach that liquid in any tube together with a gas source forms a hydraulic accumulator, Sundholm discloses, in column 2, lines 59-65, "...a valve 5 which, in a rest condition with none of the spray heads activated, maintains a relatively low pressure...if one of the spray heads begins to operate, the valves 5 open

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to supply a full working pressure...” Therefore, the at least one drive gas source 2 and the tube system 3, 4 inherently constitutes a hydraulic accumulator.

In response to applicant’s comment regarding figures 2 and 5 (and the corresponding text of the present specification), applicant’s comment is not commensurate in scope with the claimed invention. Claim 2 recites “a plurality of drive gas sources (9 to 12; 9' to 12') are arranged at a predetermined distance (l) from each other along the tube” which is shown in figure 1 of Sundholm. Although the claims are read in light of the specification, the details recited in the specification are not read into the claim limitations.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday-Thursday from 6:30 a.m. to 5:00 p.m.

The fax phone number for this Group is (703) 308-7766.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

Lesley D. Morris

Lesley D. Morris
Primary Examiner

AU 3752

11/6/00

CK

November 4, 2000